

REMARKS

Claims 1-13 and 16-21 are pending in this Application. Claims 1, 8 and 21 are independent claims.

I. ALLOWABLE SUBJECT MATTER

Applicant appreciates the indication of allowable subject matter in claims 8-9 and 19, they being allowable if rewritten in independent form to include all of the features of the base claim and any intervening claims. However, as claim 8 is an independent claim and claims 9-13, 19 and 20 depend from independent claim 8, all of claims 8-13, 19 and 20 are in condition for allowance without further amendment. The remaining pending rejected claims are in condition for allowance for the reasons discussed below.

II. CLAIM REJECTIONS UNDER 35 U.S.C. §103:

Claims 1-21 are rejected under 35 U.S.C. §103(a) as being unpatentable over Engdahl, et al. (US 4,510,602) in view of Flora-Holmquist, et al. (US 5,623,680). As claims 14 and 15 are not pending, having been cancelled in a preliminary amendment, the rejection of those claims is moot. The rejection of claims 8-13, 19 and 20 is also mooted by the allowance of independent claim 8, as discussed above. The rejection of claims 1-7, 16-18 and 21 is respectfully traversed.

The combination of references fails to disclose or suggest, a control device, comprising a plurality of inputs to respectively receive an input real value; a plurality of outputs to respectively output a digital output value; a memory to store setpoint values relating to the inputs and outputs; and an allocator to allocate a digital output value to one of the digital outputs as a function of a comparison of at least one of the input real values with a corresponding setpoint value, the setpoint values respectively including one of the state values 1, 0 and independence

state value, applicable to at least one of the setpoint values in the memory, as recited in independent claim 1, or the similar features of independent claim 21.

It is alleged in the Office Action that the output unit of Engdahl corresponds to the claimed “plurality of outputs” and that the register of the output unit 9 relates to the claimed “memory to store setpoint values relating to the inputs and outputs” (see Office Action at page 2, citing column 5, lines 4-16 as disclosing “memory means”). Thus, it is alleged that the output unit 9 stores a setpoint value relating to itself.

It is further alleged in the Office Action that the grid memory 2 corresponds to the claimed “allocator” (see Office Action at page 2, citing column 4, lines 31-61 as disclosing “allocation means”). Under this interpretation, the grid memory 2 must allocate a digital output value to the output unit 9 as a function of a comparison of an input value (value from input unit 8) with a corresponding setpoint value (i.e., value stored in the register of output unit 9).

However, as may be seen in Fig. 1, a value from the input unit 8 is received in the comparator 10 via the data bus 6. In the case of inputs, the grid memory 2 operates by way of the comparator 10 to determine if a particular condition is satisfied (col. 4, lines 31-40). There is nothing in Engdahl discloses or suggests that the grid memory 2 allocates a digital output value as a function of a comparison of an input value with any value stored in the register of the output unit 9 as alleged in the Office Action. Thus, Engdahl fails to disclose or suggest the features as alleged in the Office Action.

In addition to the above described deficiencies of Engdahl, it is admitted in the Office Action that Engdahl fails to disclose or suggest, “the allocation of a digital output value to one of the digital outputs being capable of being carried out by the allocator independently of the at least one input real value whose allocated setpoint value includes the independence state value,” as recited in claim 1, or the similar feature of claim 21.

In an effort to overcome the admitted deficiency, it is alleged that it would have been obvious to one of ordinary skill in the art, at the time of the invention, to modify the device of Engdahl according to the teachings of Flora-Holmquist. Specifically, it is alleged that Flora-Holmquist discloses “the allocation of a digital output value to one of the digital outputs being capable of being carried out by the allocator independently of the at least one input real value whose allocated setpoint value includes the independence state value,” at column 6, lines 24-46.

The cited section of Flora-Holmquist describes an application logic table 100 that is implemented by a processing unit 28 (Figs. 1, 6). Thus, it is, at best, unclear how one of ordinary skill in the art would have modified the grid memory 2 of Engdahl (i.e., the alleged “allocator”) to include the application logic table 100 of Flora-Holmquist such that the grid memory 2 of Engdahl would be capable of outputting a digital output value independently of the at least one input real value whose allocated setpoint value includes the independence state value.

Regarding the rejection of claims 2 and 3, Applicant submits that claim 2 corresponds to allowable claim 9 and therefore is also allowable. As claim 3 depends from claim 2, claim 3 is also allowable. Further, in rejecting claims 2 and 3, the Office Action fails to provide any support for the rejection of these claims. Rather, the Office Action only discusses the claim language of claims 16 and 17. As it is admitted that the combination of references fails to disclose that “the reception of a plurality of input real values includes conversion of input raw values into digital input values for the further processing as input real values,” as recited in claim 8, claim 2 is also not rendered obvious by the combination of references. Because claims 16 and 17 depend from allowable claims 2 and 3, respectively, claims 16 and 17 are also allowable.

Because the combination of references fails to disclose or suggest each and every feature recited in the rejected claims, withdrawal of the rejection is respectfully requested.

CONCLUSION

Accordingly, in view of the above amendments and remarks, reconsideration of the objections and rejections and allowance of each of the pending claims in connection with the present application is earnestly solicited.

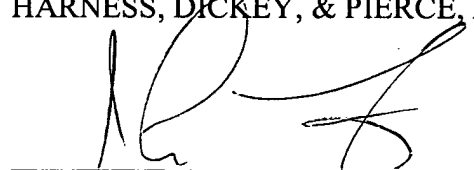
Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact John W. Fitzpatrick at the telephone number of the undersigned below.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 08-0750 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17; particularly, extension of time fees.

Respectfully submitted,

HARNESS, DICKEY, & PIERCE, P.L.C.

By



John W. Fitzpatrick, Reg. No. 41,018

P.O. Box 8910
Reston, Virginia 20195
(703) 668-8000

DJD/JWF/kas